

SUPPORT FOR THE AMENDMENTS

The amendments to the claims are supported by the specification. In particular, the recitation of the thickness of filter as specified in Claim 1 is supported by the specification at page 39, line 3. Accordingly, no new matter is believed to have been added to the present application by the amendments submitted above.

REMARKS

Claims 1, 4-6 and 8-46 are pending. Favorable reconsideration is respectfully requested.

The present invention relates to a biochip comprising a well(s) having, at its bottom, a filter comprising straight pores with a uniform diameter arranged at uniform pore spacings, wherein (a) the filter has a thickness of 2 to 7 μm , (b) the open area ratio of the filter is 15 to 60%, and (c) a reinforcing rib part is provided on the upper side or lower side of the filter in the well. See Claim 1.

The rejections of the claims under 35 U.S.C. §102(b) or §103(a) over Beattie are respectfully traversed. Beattie fails to disclose or suggest the claimed biochip kit.

Beattie discloses a device which contains a filter having a thickness of about 10 to 500 μm . See column 6, lines 12-13. However, “nanochannel glass (NCG) wafer” of in Example 1 is 0.1-1.0mm, i.e. 100-1000 μm thick (column 10, lines 12), and “porous silicon wafers” of Example 2 (Fig. 3) is 100 μm thick.

In contrast, the thickness of the filter of the claimed biochip is only 2 to 7 μm , which is much thinner than the filter in Beattie. Accordingly, Beattie fails to disclose the claimed biochip.

In addition, in the claimed biochip, a reinforcing rib part is provided on the upper side or lower side of the filter in the well. The Examiner is of the opinion that a structure without the hatches, for example, the one in-between the oval shaped structure and hatched structure” in Fig 3 (Example 3: column 13, lines 24-49) or polymeric layer containing an array of orifices (which) provides physical support to the fragile NCG wafer (Example 2: column 10, lines 37-44) corresponds to the reinforcing rib part such that shown in Fig. 6 #23 (page 5 of the Office Action).

However, the reinforcing rib part of the present invention is an additional part which is distinguished from the side wall of the well #20.

Referring to Fig. 4 of the present specification, element 23 is the reinforcing rib part, which is not the side wall of the well. That is, the biggest (outermost) circle borders on the well, not each of the 21 small circles.

On the contrary, referring back to the Figs 1 to 4 of Beattie, such a special structure other than the sidewall of the well is not used or even suggested.

If the thin filter of only 2 to 7 μm thick is to be supported by the side walls singly, the side walls should be thicken or the total length of the side walls should be elongated, which cause the number of wells or the area of a well on the biochip decreased. The reinforcing rib part removes such restrictions, and a useful biochip can be produced.

Moreover, the open area ratio of the filter is 15 to 60%. While the reference may disclose a specific value within that range in Example 3, Beattie fails to disclose this feature in a biochip having the claimed filter thickness and presence of a reinforcing rib part on the upper side or lower side of the filter in the well.

In view of the foregoing, Beattie fails to disclose or suggest the claimed biochip. Accordingly, the claimed biochip is neither anticipated by nor obvious over Beattie. Withdrawal of this ground of rejection is respectfully requested.

The rejections of the claims under 35 U.S.C. §102(b) or §103(a) over Weiner et al. is respectfully traversed. Weiner et al. fail to disclose or suggest the claimed biochip kit.

Weiner et al. disclose a method for conducting reactions in a two-dimensional array. See the Abstract. The reference fails to disclose a biochip in which (a) the filter has a thickness of 2 to 7 μm , (b) the open area ratio of the filter is 15 to 60%, and (c) a reinforcing rib part is provided on the upper side or lower side of the filter in the well, as claimed. Accordingly, Weiner et al. fail to anticipate or render obvious the claimed invention. Accordingly, withdrawal of this ground of rejection is respectfully requested.

The rejection of the claims under 35 U.S.C. §103(a) over Beattie in view of Chafin et al. is respectfully traversed.

Beattie fails to disclose or suggest the claimed biochip as discussed above.

Chafin et al. disclose a system for detecting biological materials in a sample. See the Abstract.

The reference fails to disclose a biochip in which (a) the filter has a thickness of 2 to 7 μm , (b) the open area ratio of the filter is 15 to 60%, and (c) a reinforcing rib part is provided on the upper side or lower side of the filter in the well, as claimed. Accordingly, Chafin et al. fail to anticipate or render obvious the claimed invention. Accordingly, withdrawal of this ground of rejection is respectfully requested.

In view of the foregoing, the claimed biochip is not obvious over Beattie in view of Chafin et al. Accordingly, withdrawal of this ground of rejection is respectfully requested.

The rejection of the claims under 35 U.S.C. §112, second paragraph, is believed to be obviated by the amendment submitted above. Claim 13 has been amended for clarity. In view of the foregoing, the claims are definite within the meaning of 35 U.S.C. §112, second paragraph. Withdrawal of this ground of rejection is respectfully requested.

Regarding the claims withdrawn due to restriction, Applicants request rejoinder of the same.

Application No. 10/554,218
Reply to Office Action of December 11, 2007

Applicants submit that the present application is in condition for allowance. Early notice to this effect is earnestly solicited.

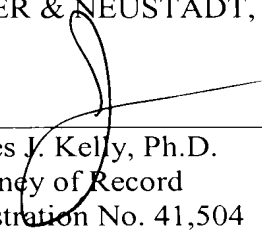
Respectfully submitted,

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